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Canadian Forestry Service-Maritimes
TECHNICAL NOTE

FOREST INSECTS AND DISEASES IN CAPE BRETON HIGHLANDS NATIONAL PARK IN 1987

Personnel of the Forest Insect and Disease Survey regularly survey national parks for forest insect and disease conditions. Some of the conditions encountered in Cape Breton Highlands National Park in 1987 are discussed briefly below.

Birch skeletonizer, a minute insect, causes late summer browning of birch foliage and premature leaf drop. Trees are not seriously affected unless high populations persist for several years. An outbreak, which began in 1984, was significantly reduced in size in 1987. Moderate leaf browning on white birch was observed only in the Grand Anse River Valley. Small numbers of this insect were observed elsewhere in the Park.

Spruce beetle usually attacks trees that have been weakened by factors such as age or defoliation. However, when spruce beetle population levels are high, healthy trees may also be attacked. This beetle continues to cause mortality of white spruce in the Park, but new attacks have been on the decline in recent years. Examination of spruce stands in the Park attacked by spruce beetle in 1987 revealed that 65% of the trees were healthy, 15% were living but infested, and 20% were dead from beetle attack.

Spruce budworm caused widespread devastation to the coniferous forests in the Park, as on the rest of Cape Breton Island, during the late 1970's and early 1980's. Populations have been very low during the past few years and this trend continued in 1987. The highest level of defoliation of current foliage recorded in the Park this year was 11% of the needles on 30% of the white spruce trees at McIntosh Brook.

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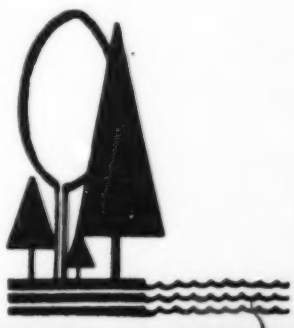

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Birch casebearer constructs a cigar-shaped case from leaf fragments and mines the leaves of birch and alder from within this case. Population levels of this insect increased within the Park this year. The highest degree of damage was again observed at the Cheticamp Park entrance where 35% of the yellow birch and 25% of the white birch leaves were affected. Light damage, ranging from 6-24%, was evident from Big Intervale, Cape North to South Harbour, as well as Broad Cove. Elsewhere in the Park only trace (0-5%) leaf browning was observed.

Deterioration of white birch has been evident along the Fundy Coast in New Brunswick and parts of Nova Scotia for several years. This damage is characterized by a chocolate-brown discoloration and a scorch-like appearance to the leaves, at times restricted to the leaf margins. Affected leaves curl and start dropping as early as mid-August. The cause of this condition is presently unknown. Damage in the Park was reduced in severity in 1987. Trace and light browning of foliage on the lower branches of young white birch was observed on French, MacKenzie and North mountains.

Spruce budmoth feeds on the developing buds and new shoots under the bud cap, which the insect secures to the growing shoot with silk. Population levels have been on the increase in recent years. Damage was evident throughout the Park in 1987, with the number of affected shoots averaging 15%. The highest damage recorded was at French Lake, where 32% of the shoots were affected and at McIntosh Brook and Ingonish Centre, where 27% were affected.

Roadside salt damage caused severe needle reddening on white spruce at the Cheticamp Park entrance and at French Lake. Moderate and severe damage was evident on eastern white pine at Ingonish Centre and at the Cheticamp Park entrance.

Ocean salt spray caused damage to the foliage of white spruce and hardwoods on the ocean-facing slopes of the hills between LaBloque and Corney Brook.

Frost - late spring frost caused new shoots to droop, turn red, and die. Damage was observed on young balsam fir and white spruce throughout the Park, but shoot mortality only ranged from 1 to 4%.

Pine leaf adelgid requires two coniferous hosts (spruce and white pine) to complete its complicated life cycle. The insect causes a gall formation at the base of spruce buds in one year and the following year the insect flies to white pine, where it feeds on the new shoots. Damage to the spruce is usually not serious, but feeding on the white pine causes the shoots to droop, turn red, and die. If population levels on pine are high, tree mortality can occur. Population levels increased in the Park and elsewhere in Nova Scotia in 1987, with 64% of the current shoots on some eastern white pine at Ingonish Centre being infested.

Gypsy moth is a major pest of forest and shade trees in the northeastern United States, southern Ontario and southern Quebec. This insect has been found recently in western Nova Scotia. Twenty-five gypsy moth traps were placed in the Park by Parks' personnel in 1987, as part of the province-wide gypsy moth monitoring program. No moths were caught this year for the second consecutive year. All Park visitors who find suspected gypsy moth should report them to Park personnel.

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